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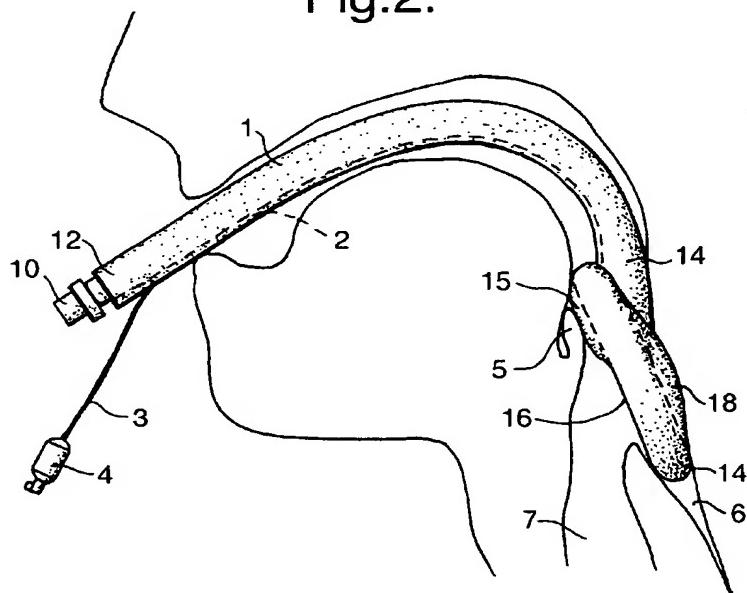
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### (54) Laryngeal mask assemblies

(57) A laryngeal mask assembly has an inflatable cuff 13 mounted at the patient end 14 of a tube 1. The cuff 13 has a region 15 on its anterior surface 16 and a region 18 on its posterior surface 17 that expand preferentially when gas pressure is increased. The cuff 13 is inflated for insertion at low pressure such that the cuff

takes one shape and is then further inflated when positioned correctly such that the region 15 on the anterior surface 16 expands and engages the epiglottis 5 and such that the region 18 on the posterior surface 17 expands and engages the adjacent tissue, pushing the anterior surface 16 forwardly.

Fig.2.





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## EUROPEAN SEARCH REPORT

Application Number  
EP 98 30 8846

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)						
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim							
D, A	US 5 241 956 A (BRAIN ARCHIBALD I J) 7 September 1993 (1993-09-07) * column 9, line 8 - column 10, line 16; figures 10-12 *	1-3, 5, 6	A61M16/04						
A	US 3 810 474 A (CROSS D) 14 May 1974 (1974-05-14) * column 2, line 38 - line 66; figures 1-4 * * column 3, line 14 - line 37 * * column 3, line 48 - line 57 * * column 4, line 23 - line 28 *	1, 4							
A	FR 2 146 470 A (EUROMEDICAL IND LTD) 2 March 1973 (1973-03-02) * page 2, line 3 - line 18; figures *	1, 7, 9							
A	DE 11 70 586 B (DR. MED. HEINZ MELZER) 21 May 1964 (1964-05-21) * column 3, line 25 - line 56; figures 1-3, 7 * * column 7, line 46 - line 58 *	1, 8							
A	US 4 340 046 A (COX EVERARD F) 20 July 1982 (1982-07-20) * column 1, line 53 - line 62; figure 3 * * column 2, line 3 - line 5 * * column 2, line 17 - line 22 * * column 5, line 59 - column 6, line 13 *	1	A61M						
<p>The present search report has been drawn up for all claims</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Place of search</td> <td style="width: 33%;">Date of completion of the search</td> <td style="width: 34%;">Examiner</td> </tr> <tr> <td>THE HAGUE</td> <td>8 November 1999</td> <td>Zeinstra, H</td> </tr> </table> <p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  C : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  &amp; : member of the same patent family, corresponding document</p>				Place of search	Date of completion of the search	Examiner	THE HAGUE	8 November 1999	Zeinstra, H
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THE HAGUE	8 November 1999	Zeinstra, H							

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 30 8846

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

08-11-1999

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5241956	A	07-09-1993	AT 151650 T AU 666756 B AU 4580393 A BR 9306757 A CA 2100998 A,C CA 2107027 A,C DE 69309930 D DE 69309930 T DK 651664 T EP 0651664 A ES 2103481 T WO 9402191 A GR 3023983 T JP 2918338 B JP 7509154 T NZ 254213 A US 5355879 A ZA 9305289 A	15-05-1997 22-02-1996 14-02-1994 08-12-1998 24-01-1994 29-03-1994 22-05-1997 23-10-1997 20-10-1997 10-05-1995 16-09-1997 03-02-1994 31-10-1997 12-07-1999 12-10-1995 27-02-1996 18-10-1994 22-04-1994
US 3810474	A	14-05-1974	GB 1402255 A CA 1000150 A DE 2246526 A DK 135564 B FI 58591 B FR 2153452 A NL 7212771 A SE 399644 B	06-08-1975 23-11-1976 29-03-1973 23-05-1977 28-11-1980 04-05-1973 27-03-1973 27-02-1978
FR 2146470	A	02-03-1973	BE 786599 A DE 2236010 A GB 1327858 A IT 962990 B NL 7210009 A	16-11-1972 01-02-1973 22-08-1973 31-12-1973 24-01-1973
DE 1170586	B		NONE	
US 4340046	A	20-07-1982	US 4471776 A	18-09-1984

